

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A method for operation of a process machine, ~~with the surrounding area being recorded by means of sensors during operation,~~ in conjunction with sensors, comprising:

dynamically recording the area surrounding the process machine with ~~on whose basis~~ object identification being ~~is~~ carried out by means of a computer unit,

switching off the process machine or reorganizing a process sequence by taking obstructions detected during the object identification in the working area of the process machine into account,

~~and with the process sequence being switched off, reorganized or replanned taking into account obstructions detected in the working area of the process machine,~~

~~characterized in that~~ wherein optical communication is set up by means of a pointing unit, which is fitted to the process machine, between the process machine and people and/or other process machines,

wherein patterns are deliberately projected onto objects located in the area surrounding the process machine by means of an illumination unit, for optical communication.

2. (currently amended) The method as claimed in claim 1,

~~characterized~~ wherein

~~in that~~ the objects are obstructions in the working area of the process machine,

which should be removed by people and/or other process machines.

3. (currently amended) The method as claimed in claim 1,

~~characterized~~ wherein

~~in that~~ the objects are objects which are related to the process sequence of the process machine,

and which should be manipulated by people and/or other process machines.

4. (currently amended) The method as claimed in ~~one of~~ claims claim 1 to 3,

~~characterized~~ wherein

~~in that~~ a laser beam is used as the illumination unit for projection of patterns onto objects,

and the laser beam is controlled by a computer-controlled deflection unit.

5. (currently amended) The method as claimed in ~~one of~~ claims claim 1 to 3,

~~characterized~~ wherein

~~in that~~ an illumination unit which operates in conjunction with an array of adjustable optical lenses is used for projection of patterns onto objects.

6. (currently amended) The method as claimed in claim 1 ~~one of the preceding claims,~~
~~characterized wherein~~
 ~~in that~~ the illumination unit is an illumination source which is already provided for other purposes in conjunction with the process machine.
7. (currently amended) The method as claimed in claim 1 ~~one of the preceding claims,~~
~~characterized wherein~~
 ~~in that~~ the projected pattern corresponds to a defined symbolic representation.
8. (currently amended) The method as claimed in claim 1 ~~one of the preceding claims,~~
~~characterized wherein~~
 ~~in that~~ the projected pattern extends completely over that surface of the object which can be seen from the viewing direction of the process machine.
9. (currently amended) The method as claimed in claim 1 ~~one of the preceding claims,~~
~~characterized wherein~~
 ~~in that~~ the pattern extends only over a portion of that surface of the object which can be seen from the viewing direction of the process machine.

10. (currently amended) The method as claimed in claim 1 ~~one of the preceding claims~~,
characterized wherein
in that the pattern is projected in a blinking form.
11. (currently amended) The method as claimed in claim 1 ~~one of the preceding claims~~,
characterized wherein
in that the intensity of the illumination is varied automatically on the basis of changing environmental conditions.
12. (currently amended) The method as claimed in claim 1 ~~one of the preceding claims~~,
characterized wherein
in that light at different wavelengths is used for illumination.
13. (currently amended) The method as claimed in claim 1 ~~one of the preceding claims~~,
characterized wherein
in that light in the non-visible wavelength band, in particular in the infrared, is used for illumination.
14. (currently amended) The method as claimed in claim 1 ~~one of the preceding claims~~,

~~characterized~~ wherein

~~in that~~ the illumination source is switched on and off depending on the environmental conditions.

15. (canceled)

16. (currently amended) A process machine, comprising

sensors by means of which data relating to the surrounding area is recorded dynamically during operation of the process machine,

a computer unit by means of which object identification is carried out on the basis of the data relating to the surrounding area,

a control unit and further means are provided, in order to switch off, reorganize or replan the process sequence taking into account obstructions detected in the working area of the process machine, wherein

~~characterized~~

~~in that~~ the process machine is provided with a pointing unit for communication purposes, with the pointing unit having an illumination unit,

by means of which communication is carried out between the process machine and people and/or other process machines,

and by means of which patterns are deliberately projected onto objects which are located in the area surrounding the process machine.

17. (currently amended) The process machine as claimed in claim 16, wherein
~~characterized~~
~~in that~~ a galvanometer scanner is provided as the optical illumination unit.
18. (currently amended) The process machine as claimed in claim 16, wherein
~~characterized~~
~~in that~~ an illumination means which comprises a fiber-coupled lens array is provided as the optical illumination unit.
19. (currently amended) The process machine as claimed in claim 16 one of the preceding claims, wherein
~~characterized~~
~~in that~~ the optical illumination unit is already provided for other purposes in conjunction with the process machine.
20. (currently amended) The process machine as claimed in claim 16 one of the preceding claims, wherein
~~characterized~~
~~in that~~ a means is provided in order to operate the illumination means in a pulsed form.

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21. (currently amended) The process machine as claimed in claim 16 ~~one of the preceding claims, wherein~~ characterized

~~in that~~ an additional means is provided in order to automatically change the position and/or the orientation of the illumination unit on the process machine.

22. (canceled)